

# **Prioritizing Play, Universal Design for Learning, and Nature-Based Learning: Professional Development for Educators**

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## **Introduction**

As teachers are continually pressured to “conform to more rigid and traditional education approaches” (Erwin & Delair, 2004, p. 35), it is essential to provide meaningful professional development opportunities that upend these approaches. Teacher Professional Development (PD) can provide strategies and support to teachers to ensure they are able to implement developmentally appropriate practices and inclusive strategies that support children’s overall well-being within their educational spaces. Play, Universal Design for Learning (UDL), and Nature-Based Learning (NBL) are individual methods that support children’s overall development and value children’s individual needs through student-centered approaches. As such, there is a need for professional development opportunities that provide educators with better understanding of these practices and appropriate integration. The purpose of this article is to share the collaboration, processes, and implementation of a professional development workshop led by the authors that was created for and provided to educators who were interested in implementing and intersecting these three educational strategies that can support all learners.

Authors Melissa Rodriguez-Meehan and Marisa Kofke are former certified classroom teachers and current assistant professors in a teacher educator program. Kyra Stephenson is a certified teacher currently leading an NBL program within a public-school setting. In this article, we share a description of the workshop and our individual roles throughout, with rationale for the need for each practice briefly rooted in the relevant scholarly literature. We carefully planned the workshop using the effective professional development components of active learning and collaboration (Darling-Hammond et al., 2017; Sancar et al., 2021). In each section of this article, we describe how these components were integrated into this workshop to support teachers’ understanding of the importance of these pedagogical approaches while providing strategies and activities that could easily be translated into their classroom settings.

As previously mentioned, three meaningful and engaging teaching practices were discussed and demonstrated in the workshop: playful learning within teaching, incorporating UDL, and the integration of Nature-Based Learning (NBL). The objective of the workshop was for participants to understand how to successfully intersect all three of these strategies and incorporate them into their own practice, while recognizing the research that anchors these practices. The literature supports playful learning in early childhood and elementary settings (National Association for the Education of Young Children, 2020; Lynch 2015), yet with an emphasis on academic requirements, play has been pushed aside in many educational spaces—although play has been established to support brain development, in addition to physical, social-emotional, and language development (Parrot & Cohen, 2020). Furthermore, the research supports Universal Design for Learning approaches in classrooms. Therefore, it is beneficial for teachers to be provided with this training. Rusconi and Squillaci (2021) found that UDL training supports the implementation of more accessible learning environments for all learners. Positive outcomes from nature-based

learning experiences have been well established in the research and have emphasized the importance of how “fully assessing and making use of the benefits of nature-based instruction can serve all children” (Kuo et al., 2021, p. 57).

## The Workshop

The PD workshop was part of a larger conference for local educators held in Western New York in the summer of 2024. This conference was focused on play with an emphasis on “How Creativity Bridges the Gap between Playful Pedagogy and Practice” and took place at an art museum. The authors collaborated to design a workshop that would model being playful while providing content and strategies that teachers could immediately begin integrating in their classrooms. The workshop was titled, *Play Every day: Ways to Foster Joy, Choice, and Active Learning in Classrooms and Outdoors*, and emphasized the intersection of the three pedagogical approaches previously mentioned: play, UDL, and NBL. We led two separate sessions of the same workshop with approximately 20-25 participants in each session. Each workshop was one hour in length and included participants with a variety of teaching roles, including Pre-kindergarten teachers, K-2 teachers and coaches, English as a New Language (ENL) teachers, special education (elementary and secondary) teachers, art educators, physical education teachers, speech and language pathologists, in addition to others.

Having educators from various grade levels and content areas provided the opportunity for a variety of participants’ perspectives and insights. We received feedback from 38 participants stating why they chose this workshop, with an array of responses emphasizing learning new strategies, both inside and outside the classroom. When participants were asked why they chose this workshop, we received responses (Figure 1) which demonstrated teachers' excitement about learning new ways to center play, inclusiveness, and nature in their educational settings. This is important information that demonstrates the usefulness of working with teachers on how to integrate the three practices of play, UDL, and NBL. The responses from other activities are included in this article, as well, to further demonstrate how these teachers felt throughout the workshop. In the next sections, we describe the parts of the workshop led by each author.

**Figure 1**

*Reasons participants chose this workshop*

<b>Reasons Participants Chose This Workshop</b>		
Ideas for teaching/centers/outside	Sounded informative and fun	Looking for more ways to include play in learning
Inside and outdoor activities	Classroom connection to play	I am interested in play outside
To incorporate more nature into my day-to-day teaching	Explore more ways to play	Adding more joy to play
Interested in learning more about play-based activities	Play based lit; instruction inspiration	creating plans for enhancing play-based learning

Learn new ways to have fun	I want to center play and joy	To have a more engaging play time & choices for play with my class
We want to incorporate more choice and play-based learning for our students	Liked having strategies to add joy, play in the classroom	I want to do more integrating play in nature (writing, improv, art)
Even though I teach high school I believe it's important to have them use creativity in play	Learn different and accessible ways to bring play/joy into our classroom	Interested in inclusive play for students with disabilities

### **Playfulness in Classrooms: More Play, More Joy**

Play has been well established in the literature as a necessity for young children and their overall development and learning (Yogman et al., 2018), yet due to academic demands, play is often at odds with more didactic learning methods (Hedges, 2000; Miller & Almon, 2009). Additionally, barriers to play integration, such as time, curriculum demands, lack of administrator support, and lack of teacher training can discourage educators from integrating playful approaches in their classrooms (Bubikova-Moan et al., 2019; Rodriguez-Meehan, 2022). These barriers are valid concerns for educators and an important consideration during this workshop. Melissa Rodriguez-Meehan wanted to ensure that the strategies provided were feasible for educators to replicate while allowing them to experience some of the activities firsthand.

The workshop began with about 10 minutes of free play led by Melissa Rodriguez-Meehan (the first author). Free play, both uninterrupted and completely student-driven, is an activity that the author integrates into all her in-person college courses on a regular basis. During the first 10 minutes of the workshop, participants were asked to choose a play activity. Several materials, including play dough, blocks, shapes, magna tiles, nature artifacts, and coloring pages were laid out on the tables from which participants could choose. Participants were told to explore the play activities however they would like (or how they thought a child may do so). During this part, the presenters circulated the room and observed a variety of play. The participants were highly engaged and creative as they participated in the self-selected play activities. Following introductions, there was a short ice breaker asking participants to reflect on their childhood memories. This provided an opportunity for participants to make personal and professional connections to the workshop while applying their prior knowledge to the current setting. Then they completed a “jot thought sticky notes” activity responding to the following questions:

- What play activity were you participating in?
- Skills you think children could learn at this play center (i.e., counting, sorting, writing, etc.)
- How did you feel while you were playing?

The sticky notes were placed on a large piece of chart paper to create an artifact and refer to at a different time. When responding to the question, “How did you feel while you were playing?”

the participants overwhelmingly described feeling “calm,” “relaxed,” “engaged,” and “joyful/happy.” Additionally, the participants mentioned literacy, math, science, and social emotional skills such as letter identification, shapes, problem solving, and cooperation, which demonstrated some examples of how the participants made connections to learning through their play. Next, we held a continuum of play activity where the participants were asked to get up and move out of their seats, modeling active learning approaches. Like a “four corners” activity, participants moved around the room based on their beliefs around play (Figure 2). The purpose of this activity was to gauge both the participants’ beliefs about play and their comfort level around play integration.

## Figure 2

### *Continuum of play activity*



During both sessions, there were a variety of participants in each corner, which provided the presenters with a general understanding of how the participants felt about play and play integration. The diverse perspectives and experiences in the room were briefly discussed in the whole group setting. Following this activity, Rodriguez-Meehan provided an overview of play, which included definitions of play and a discussion on how various definitions of play exist in the literature. We discussed how the broader term of playful learning has been defined by five specific characteristics: joyful, meaningful, actively engaging, iterative, and socially interactive (Liu et al., 2017) and how it is often encompassed within the overlapping categories of delight, wonder, and choice (Mardell et al., 2016). After providing this foundational information, Rodriguez-Meehan shared some classroom ideas, including starting each day with free play options for students, where teachers replace morning worksheets or other “academic tasks” with open-ended, free play activities from which students can choose such as blocks, art supplies, toys, manipulatives, sensory activities (e.g., sand tables), dramatic play options, etc. It was emphasized that this free playtime should include activities directly related to students’ interests. Additionally, Rodriguez-Meehan described how to increase playful opportunities through play and choice centers. For example, we discussed how students can be provided the opportunity to visit a play center within daily center rotations, or children can be given a daily menu of activities, including both playful and more academic-centric activities from which they can choose.

We discussed the importance of choice centers, specifically where children can move freely among a variety of activities, following their interests and activating intrinsic motivation while still meeting academic learning standards and supporting children's overall development. Furthermore, we discussed finding more general opportunities for choice within the classroom setting. For example, we discussed offering students a variety of seating options (e.g., floor seating, alternative seating such as yoga balls, floor mats), the use of different writing utensils (e.g., pencils, colored pencils, and markers), choice when considering group size or formation (e.g., allowing students to work independently, in pairs, or in small groups), and offering children more freedom around writing activities and when choosing books to read. The examples of gamification were specific to the experiences of Rodriguez-Meehan. These examples included a description of an online trivia-based game called *Blooket* (2024), which allows educators to create question banks and provides students with the opportunity to review content in a fun and engaging manner. We briefly discussed the use of Kagan Cooperative Learning Structures, such as "find someone who," "quiz-quiz-trade," and "mix-pair-share," which are often utilized to make learning more active and engaging and are "designed to promote cooperation and communication in the classroom" (KaganOnline, 2024). These learning structures also provide an opportunity for students to interact with and review content in a more playful manner. This section of the PD was focused on how all these strategies provide a more inclusive classroom environment, emphasizing student-centered approaches rooted in playful learning experiences and an emphasis on student choice.

### **"Nurture Joy and Play": The UDL Connection**

Given the natural intersection of UDL, play-based learning, and NBL, Marisa Kofke (the second author) provided a brief overview of UDL, the intersection with NBL and some examples. UDL was first developed from the principles of Universal Design for architecture that intentionally takes down barriers to create fully accessible physical spaces for disabled people. Colleagues with the Center for Applied Special Technology (CAST) applied these concepts to the neurological processes involved in learning and developed UDL across three principles of multiple means of Engagement, Expression, and Representation (Bacon, 2014; Rose, 2012). It is beneficial for teachers to learn about UDL while completing professional development activities (Craig et al., 2022). UDL has been proposed as a key framework for use when engaging in outdoor play (Kelly et al., 2022). In the most recent update of the UDL guidelines developed by CAST, "nurture joy and play" has been added to the multiple means of engagement guidelines (CAST, 2024). Due to this inclusion of joy and play in the CAST guidelines, we decided to incorporate how UDL can support NBL and play into this presentation. This inclusion also provided teachers with the awareness that the pedagogical tools presented were developed for classes that include disabled students. We believe that this resulted in many teachers and related services providers who teach and work with students with disabilities attending these sessions.

Kofke started by reviewing the concept of UDL with a quote: "The purpose of UDL is to integrate accommodations seamlessly into instructional design rather than attempting to add accommodations later for individuals" (Pikus et al., 2024, p.2) and asked for a raise of hands from attendees who were already familiar with UDL. To the author's surprise, the majority in both sessions were not familiar with UDL. In response, Kofke explained the CAST resources,

provided more description about UDL, and asked attendees who were aware of UDL to explain what it means to them. Then a slide of the UDL guidelines was shared, highlighting the addition of “nurture joy and play” as the rationale for discussing UDL in the presentation. The slides continued with sections about UDL and inclusive play and UDL and outdoor play. Recent literature was reviewed, explaining that when students with disabilities are often excluded from outdoor play, they realize that the outside is inaccessible. However, when students engage in accessible outdoor play, they can benefit academically and realize that the outdoors can be accessible to them (Menzies et al. 2020; Pikus et al., 2024).

Kofke explained that UDL is a proactive approach that acknowledges students will have a variety of needs—disability being one—in addition to language and a myriad of at-risk factors. When teachers plan with UDL in mind they attempt to ensure that as many kinds of students as possible can participate in the activities in the ways that work the best for them. To do this, teachers plan with choices for students stemming from flexible lesson objectives. A table was shared providing examples of how students can be provided with multiple means of engagement, expression, and representation in NBL. Other aspects of proactive NBL planning include previewing the space, taking away any debris, and even roping off unsafe areas, if needed. Ways to provide choices for a student who is a wheelchair user were discussed. This student could lay down on the ground outside, on or off a blanket to connect with the earth, or they can participate while in their wheelchair. When working with UDL in mind, it is the student’s choice to determine which activity works best for them.

Several other inclusive concepts and practices were reviewed during this part of the workshop. The inclusive concept of *presuming competence* was also briefly discussed. When presuming competence, it is assumed that students are participating in the activities even if it appears they are engaging in alternative, non-normative ways (Biklen & Burke, 2006). This was covered as a reminder to the attendees that when disabled students are outside, they may not act or look like they are engaged or enjoying the activities. Some of the attendees were familiar with this concept, but many were not. Then, areas of mobility, sensory, social, and behavioral aspects related to UDL and outdoor play were briefly reviewed. This part of the presentation elicited discussion and sharing of ideas from the teachers. Several offered their own experiences. One participant shared how, for behavioral purposes, areas of the outside spaces were roped off. Kofke explained the positive socialization effects that can occur when students are outside and to be mindful of fostering reciprocal social relationships by resisting having peers take on the role as a helper to a disabled student (Kelly et al., 2022). These examples were useful for the attendees to keep in mind as they continued the session and were asked reflection questions about accessible and inclusive play on an exit ticket.

### **Nature-Based Learning: Joy and Freedom**

The purpose of nature-based learning (NBL)—as defined by Kyra Stephenson (the third author)—is to provide all students with immersive experiences in natural environments to foster curiosity, discovery, play, environmental responsibility, support holistic wellness, build community, and promote development with an academic focus. Educators can engage in consistent NBL experiences through a co-teaching model that focuses on the pillars of nature-based learning: community connection, holistic wellness, and academic growth, which were

developed by Kyra Stephenson of Nature Mind Solutions and Chris Widmaier of Rochester Ecology Partners. NBL foundations start with nature play. Nature play is an unstructured play that takes place in natural environments and landscapes, includes sensory elements, and incorporates loose materials such as sticks, rocks, water, and weather elements (Alla & Truong, 2024). It encourages children to explore, create, and take risks all while engaging and learning in the natural world. These experiences promote holistic wellness and appropriate cognitive development (Gill, 2014). This final portion of the workshop was led by Kyra Stephenson. She modeled several of the NBL strategies she uses in her position as an NBL coach in a K-6 urban school. In this section of the PD, she brought all the components together, demonstrating how to intersect play and UDL through choice making and free play opportunities outdoors.

Recognizing that connecting with nature does not come naturally for all educators, and that it is crucial for educators to fully experience nature play opportunities within workshops, Stephenson provided hands-on activities that engaged participants in how lessons may look, feel, and sound. Since the first steps in providing nature play opportunities for children are to simply take them outside to green spaces or provide natural materials if green spaces are limited or unsafe, a similar strategy is taken with educators who also need to feel connected and comfortable outdoors to provide students with a safe experience outside. The most successful NBL workshops have a component where participants spend time outside and play themselves.

Stephenson had participants meet her and the other authors outside at a manicured green space on museum grounds. Prior to going outside, Stephenson had set up several materials with a variety of activities that support specific kinds of nature play and inquiry (Table 1).

**Table 1**  
*Nature Play materials organized by play/inquiry skill*

Imagination	Exploration	Building	Natural	Observations
Paint brushes	Small shovels	Burlap	Sticks	Magnifying glasses
Pots and pans	Clothespins	Cordage	Rounded stones	Clear containers
Kitchen materials	Buckets	Rope	Pinecones	Binoculars
Baskets	Funnels	PVC pipes/fittings	Seeds	Clip Boards
Popsicles sticks	Bandanas	Tarp	Bark and Tree Cookies	Tweezers

*Note: A list of materials used during outdoor part the workshop*

Once outside, participants were asked to create a large inclusive circle, modeling the NBL strategies Stephenson uses with children to start NBL lessons. Each participant was asked to do a wellness check-in on how they were feeling mentally, physically, and emotionally. They were asked to think about a time they played outside in nature and how it made them feel. They were encouraged to tap into that memory as they were going to participate in nature play with a variety of choices. Then, Stephenson reviewed the physical boundaries of the outdoor space in which the participants had to remain and provided simple safety directions for the materials. The nature play materials were spaced out under a tree centrally located within the play area.

Participants were given an estimated amount of time to play, and told to, “Go!” and explore freely among the play area.

Participants were observed playing independently and in small groups. Some invited others to join them, while some collected a variety of materials to design objects and invent games. One participant was struggling and needed support with an entry point into play; a simple suggestion was given to use a rope and stick to help a group that was beginning to build a fort. We heard sounds of laughter and joy, cooperation and compromise, and once participants were told to wrap up, sounds of disappointment could be heard with participants asking for more time to finish. Participants then completed a *notice and wonder* protocol about their nature play experience that asked them to write down what they noticed and what they wondered. They produced statements such as:

“I noticed that when you came over and encouraged me to play with a small group, I felt more confident in how to play with the materials.”

“I wonder if children are less inhibited or more inhibited to participate in nature play?”

“I can see how much joy and freedom this brings.”

“This tapped into a part of me that I haven’t felt in a while.”

“I can see why kids need to do more of this.”

“With natural objects, I feel a connection with nature, and it is easier to be creative”

“I finally felt at ease.”

Providing both students and educators with the time and space to find joy, feel free, and play in nature can have lasting impacts on their overall wellness, as evidenced by some of the statements made by the educators. Playing in natural spaces gives students opportunities to acquire knowledge, discover, explore, imagine, communicate, problem solve, and collaborate. Through nature play, barriers often seen in classroom settings are broken down, creating an environment that fosters inclusion for all students and demonstrating a connection to UDL. Uniquely gifted students frequently shine in these settings. With neuroplasticity at its peak during early childhood, nature play is essential for brain development (Tooley et al., 2021). In natural settings, children experience wonder and awe, enhancing their ability to focus. Nature also relieves stress, reduces anxiety, and provides a much-needed reprieve for an overstimulated brain (Luque-García, 2022). By integrating nature play into schools, we create inclusive, engaging spaces where all students can thrive academically, socially, and emotionally.

### **Feedback from Participants**

At the end of the workshop, participants were asked to fill out a play summit reflection which asked five questions:

1. What are some ways you can academically engage students through play?
2. During your school day, how could you incorporate accessible nature-based play?
3. What questions do you have about play integration in your classroom?
4. What would your inclusive playful classroom look like?
5. What (general) questions/comments do you have?

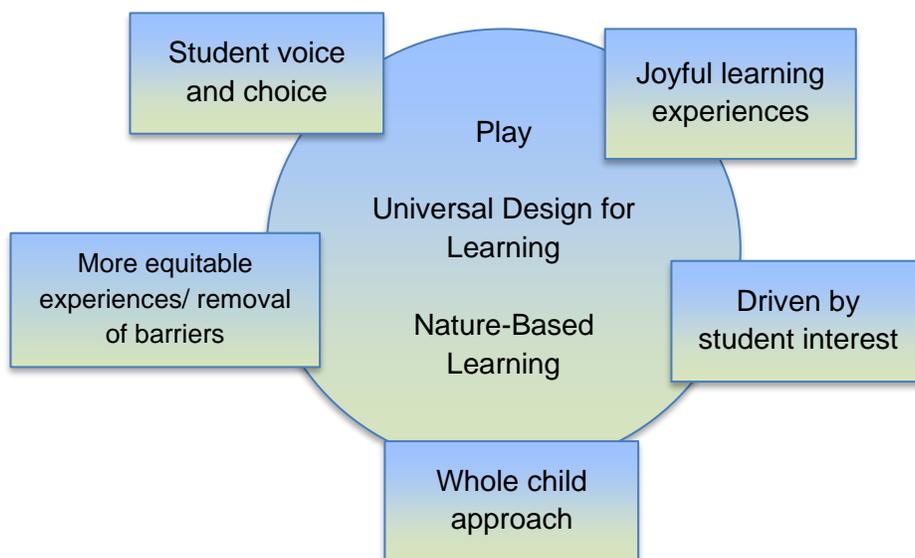
Although not all reflections were returned to us, the ones that were gave insightful feedback, including comments regarding how the workshop provided additional motivation and ideas for

participants to integrate more play, an increase in knowledge about UDL, and how the idea of integrating more freedom and choice overall—both indoors and outdoors—can support and enhance student learning. The participants provided examples of how to take what they learned back into their educational settings while also describing wonders they had about integration, such as access to materials, the barrier of time, and how to support all teachers in “letting kids be kids.” The participants in the workshops demonstrated a willingness to integrate these strategies and methods in their classrooms. One teacher specifically asked us to get in contact with their administrator to provide this PD to their entire school. Our implications for this feedback and reflections about the workshop are discussed in the remaining sections of this article.

### Bringing It All Together

The facilitators of this workshop have a combined 35 years of teaching in K-12 settings. Our teaching philosophies and pedagogical approaches align with ensuring students have access to joyful and meaningful learning opportunities that are driven by their own interests, provide multiple opportunities for student voice and choice, and engage students in authentic learning experiences. Through our collaboration on a larger NBL-based project, we realized that the intersection of play, UDL, and NBL encompass these essential components. We wanted to share this unique combination of teaching strategies to better support both students and educators. Overall, this workshop provided educators an opportunity to not only see the intersection of play, UDL, and NBL (Figure 3) and how it can be beneficial for students, but to also reflect on how these pedagogies can look in their own classrooms, while experiencing some of the approaches themselves. The feedback we received from our various sources (e.g. the end-of-session feedback, the wonder and notice activity, the post-it notes activity) supported our initial objective that intersecting these specific strategies would be positive and useful for teachers. Play, UDL, and NBL share a variety of attributes that are essential to children’s development and overall well-being, while providing environments that empower students and support their learning. We believe that giving educators the opportunity to experience these practices firsthand supports additional motivation, engagement, and willingness to transfer these practices into their classrooms.

**Figure 3**  
*The intersection of Play, UDL, and NBL*



## Recommendations

We recommend that due to the dearth of resources at the intersection of play, UDL, and NBL, that teacher educators should continue to purposefully integrate them into professional development opportunities and classroom pedagogy. Furthermore, many of the attendees were special educators or worked with students with disabilities. We provided the only session that incorporated inclusive methods into the PD that day. For special educators and related services personnel to fully engage in PD opportunities, there needs to be more options that promote inclusive methods, like UDL. Given that UDL synthesizes with Culturally Sustaining Pedagogies (Waitoller & King Thorius, 2016), there are implications that the intersection of these strategies can further support inclusive instruction of students from *all* historically minoritized identities. Finally, the authors also recognize that the topics described are broad and could have each been their own PD session. For future sessions, it would be ideal to have more time with each approach, and/or provide additional follow-up sessions to expand on the activities and provide participants with more time to engage with the content and the overall experience.

## References

- Alla, K., & Truong, M. (2024). Nature play and child wellbeing. *Australian Institute of Family Studies; Australian Government: Canberra, Australia.*
- Bacon, K. (January 14, 2014). All along. How a little idea called Universal Design for Learning has grown to become a big idea — Elastic enough to fit every kid. Ed. Magazine. *The Magazine of the Harvard Graduate School of Education.* Retrieved from: <https://www.gse.harvard.edu/ideas/ed-magazine/14/01/all-along>
- Biklen, D., & Burke, J. (2006). Presuming competence. *Equity & Excellence in Education*, 39(2), 166-175. <https://doi.org/10.1080/10665680500540376>
- Blooket (2024, December). Retrieved from <http://blooket.com>.
- Bubikova-Moan, J., Næss Hjetland, H., & Wollscheid, S. (2019). ECE teachers' views on play-based learning: A systematic review. *European Early Childhood Education Research Journal*, 27(6), 776-800. <https://doi.org/10.1080/1350293X.2019.1678717>
- Craig, S.L., Smith, S.J. & Frey, B.B. (2022) Professional development with Universal Design for Learning: supporting teachers as learners to increase the implementation of UDL, *Professional Development in Education*, 48(1), 22-37. <https://doi.org/10.1080/19415257.2019.1685563>
- CAST (2024). Universal Design for Learning Guidelines version 3.0. Retrieved from <https://udlguidelines.cast.org>.
- Darling-Hammond, L. (2017). Effective teacher professional development. *Learning Policy Institute.*
- Erwin, E.J. & Declair, H.A. (2004). Patterns of resistance and support among play-based teachers in public schools. *Contemporary Issues in Early Childhood*, 5, 35-50.
- KaganOnline (2024, December). Retrieved from <https://www.kaganonline.com/>.
- Gill, T. (2014). The benefits of children's engagement with nature: A systematic literature review. *Children, Youth and Environments*, 24(2), 10–34. <https://doi.org/10.7721/chilyoutenvi.24.2.0010>

- Hedges, H. (2000). Teaching in early childhood: Time to merge constructivist views so learning through play equals teaching through play. *Australasian Journal of Early Childhood*, 25(4), 16-21.
- Kuo, M., Barnes, M., & Jordan, C. (2022). Do experiences with nature promote learning? Converging evidence of a cause-and-effect relationship. *High-Quality Outdoor Learning*, 47-66. [https://doi.org/10.1007/978-3-031-04108-2\\_3](https://doi.org/10.1007/978-3-031-04108-2_3)
- Kelly, O., Buckley, K., Lieberman, L. J., & Arndt, K. (2022). Universal Design for Learning – A framework for inclusion in outdoor learning. *Journal of outdoor and environmental education*, 25(1), 75-89. <https://doi.org/10.1007/s42322-022-00096-z>
- Liu, C., Jensen, H., Hopkins, EJ, Neale, D, Zosh, J.M., and Whitebread, D. (2017) Neuroscience and learning through play: A review of the evidence [White paper]. *The LEGO Foundation*.
- Luque-García, L., Corrales, A., Lertxundi, A., Díaz, S., Ibarluzea, J., (2022). Does exposure to greenness improve children’s neuropsychological development and mental health? A Navigation Guide systematic review of observational evidence for associations. *Environmental Research*, 206, 1-28. <https://doi.org/10.1016/j.envres.2021.112599>
- Lynch, M. (2015). More play, please: The perspective of kindergarten teachers on play in the classroom. *American Journal of Play*, 7(3), 347-370.
- Mardell, B., Wilson, D., Ryan, J., Ertel, K., Krechevsky, M., & Baker, M. (2016). Towards a pedagogy of play. *Cambridge, MA: Harvard Graduate School of Education*.
- Menzies, A., Mazan, C., Borisoff, J. F., Mattie, J. L., & Mortenson, W. B. (2020). Outdoor recreation among wheeled mobility users: Perceived barriers and facilitators. *Disability and Rehabilitation: Assistive Technology*, 16(4), 384–390. <https://doi.org/10.1080/17483107.2019.1710772>
- Miller, E., & Almon, J. (2009). Crisis in the kindergarten: Why children need to play in school. *Alliance for childhood (NJ3a)*.
- National Association for the Education of Young Children (NAEYC, 2024). Developmentally appropriate practice (DAP) position statement. Retrieved from <https://www.naeyc.org/resources/position-statements/dap/contents>
- Rose, D. (May 7, 2012). Transforming education with Universal Design for Learning. Retrieved from: <https://obamawhitehouse.archives.gov/blog/2012/05/07/transforming-education-universal-design-learning>
- Parrott, H. M., & Cohen, L. E. (2020). Advocating for play: The benefits of unstructured play in public schools. *School Community Journal*, 30(2), 229-254.
- Pikus, A. E., Etchison, H. M., Gerde, H. K., & Bingham, G. E. (2024). Nature for all: Utilizing the universal design framework to incorporate nature-based learning within an early childhood inclusive classroom. *TEACHING Exceptional Children*, 57(5), 338-347. <https://doi-org.brockport.idm.oclc.org/10.1177/00400599241257438>
- Rodriguez-Meehan, M. (2022). “Could that be play?”: Exploring pre-service teachers’ perceptions of play in kindergarten. *Early Childhood Education Journal*, 50(8), 1303-1316. <https://doi.org/10.1007/s10643-021-01257-3>
- Rusconi, L., & Squillaci, M. (2023). Effects of a Universal Design for Learning (UDL) training course on the development teachers’ competences: A systematic review. *Education Sciences*, 13(5), 466. <https://doi.org/10.3390/educsci13050466>

- Sancar, R., Atal, D., & Deryakulu, D. (2021). A new framework for teachers' professional development. *Teaching and teacher education*, 101, 103305.  
<https://doi.org/10.1016/j.tate.2021.103305>
- Tooley, U. A., Bassett, D. S., & Mackey, A. P. (2021). Environmental influences on the pace of brain development. *Nature Reviews Neuroscience*, 22(6), 372-384.  
<https://doi.org/10.1038/s41583-021-00457-5>
- Waitoller, F. R., & King Thorius, K. A. (2016). Cross-pollinating culturally sustaining pedagogy and Universal Design for Learning: Toward an inclusive pedagogy that accounts for dis/ability. *Harvard Educational Review*, 86(3), 366-389.
- Yogman, M., Garner, A., Hutchinson, J., Hirsh-Pasek, K., Golinkoff, R. M., Committee on Psychosocial Aspects of Child and Family Health, & Council on Communications and Media. (2018). The power of play: A pediatric role in enhancing development in young children. *Pediatrics*, 142(3).

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